

## **2 QUALITY MANAGEMENT**

Design-Build Contractor shall conduct all Work necessary to meet the quality requirements for the Project in accordance with the applicable requirements in the PPA Documents, including Project Standards and this Section 2; Governmental Approvals; and applicable laws.

### **2.1 Schedule Management**

Design-Build Contractor is responsible for scheduling its Work with sufficient time to satisfy the requirements for Witness Points and Hold Points.

#### **2.1.1 *Witness Points***

At each Witness Point, Design-Build Contractor shall submit the identified items to INDOT for review. Work may proceed beyond a Witness Point, at Design-Build Contractor's risk.

Anticipated Witness Points for design include, but are not limited to, the following:

1. Plan sheets not defined as Hold Points
2. Preliminary layout, typical sections and design computations
3. Finalized cross sections
4. Transportation Management Plan
5. Level 1 and 2 FDCs

In its reasonable discretion, INDOT reserves the right to add Witness Points to any aspect of the Project.

INDOT will maintain the right to review and comment if it is determined that revisions and Level 1 and 2 FDCs are not in conformance with the PPA, TPs, and applicable Project Standards.

#### **2.1.2 *Hold Points***

At each Hold Point, Design-Build Contractor shall submit the information required to INDOT for review. No Work relating to a Hold Point shall proceed beyond that Hold Point until written release is given by INDOT.

Hold Points shall occur for all construction activities that require inspection by INDOT as described in the INDOT Standard Specifications, Recurring Special Provisions, or Technical Provisions.

Anticipated Hold Points for construction include, but are not limited to, the following:

QC plan approval for grading

1. QC plan approval for PCCP and HMA paving
2. QC plan approval for erosion and sediment control
3. QC plan approval for structural steel painting
4. Pre-paving conference for roadway

5. Pre-pour conference for bridge decks
6. Fabrication plant inspections
7. After reinforcing bar placement and prior to structural concrete placement
8. Structural concrete placement
9. Falsework Plan approvals
10. Post tensioning technical data and details
11. Erection plan approval for overhead structural members
12. Removal plan approval for existing structures
13. Work area access plan approval
14. ITS Submittals

Anticipated Hold Points for design include, but are not limited to, the following:

1. Pipe structure, small culvert, and large culvert design
2. Detention design
3. Lake County Drainage Board notification
4. Newton County Drainage Board notification
5. Approval of Rule 5 NOI
6. Construction sequencing, MOT, and temporary traffic control Plans
7. MOT Level 1 design criteria checklist
8. MOT operations analysis
9. Level 1 design criteria checklist for design items
10. Level 2 design criteria for design items
11. Final geometric layout
12. Pavement design
13. Finalized typical cross sections
14. Finalized plan and profile grade
15. Clearances and geometrics for structures
16. Foundation review
17. Foundation design of overhead sign structures
18. Roadside barrier design
19. Load ratings for bridges
20. Geotechnical evaluation report
21. Retaining wall design and details
22. Signing Plans
23. Lighting Plans

24. ITS Plans
25. Unique Special Provisions
26. Environmental permit revisions
27. Approval of preliminary Plans for bridge rehabilitation with calculations
28. Approval of final Plans for bridge rehabilitation with calculations
29. Approval of Stage 1 Plans with calculations
30. Approval of Stage 3 Plans with calculations
31. Approval of RFC Plans with calculations
32. Bridge scour reports
33. Approved working drawings as defined in the INDOT Standard Specifications
34. Erosion and sediment control Plans
35. Noise barrier Plans
36. NDCs
37. Level 3 FDCs

In its reasonable discretion, INDOT reserves the right to add Hold Points to any aspect of the Project.

NDC and Level 3 FDC revised Plans and engineering analysis and calculations shall be submitted for review and acceptance by INDOT prior to construction Work proceeding.

## **2.2 Submittal and Electronic Posting Requirements**

Design-Build Contractor will be provided access to the Project's dedicated website. All Submittals shall be made electronically in PDF format through INDOT's Project website. Access and use of this website will be described during the pre-construction meeting.

Design-Build Contractor shall send an e-mail notification of all Submittals to the following personnel:

1. INDOT's Project Engineer/Project Supervisor
2. INDOT's Area Engineer
3. INDOT's Design-Build Project Manager
4. INDOT's Consultant Project Manager
5. INDOT's Consultant Design Manager
6. INDOT's Document Control Manager

Email notification shall also be sent to other persons as identified by INDOT.

The date of a Submittal will be considered to be the date of the e-mail notification to the specified INDOT personnel. Submittals will not be considered complete until the required e-mail notification is sent.

Design-Build Contractor shall respond to all comments and questions from reviews of Witness Point and Hold Point Submittals.

Witness Point and Hold Point Submittals are subject to all Submittal and electronic posting requirements of this Section 2.

Design-Build Contractor shall maintain a complete set of current Released for Construction Documents on the Project website at all times. The Plans shall be updated as revisions are made. In addition, a file containing only the revised plan sheets shall be posted to the Project website when revisions are made. Current copies of all supporting Design Documents shall be maintained on the Project website in a similar fashion.

For each Segment and the Kankakee River bridge, Design-Build Contractor shall provide two full-size and ten 11-by-17-inch bound hardcopy RFC Plan sets at the field office for the Department's use. Design-Build Contractor shall update the hard copies when revisions are made.

## **2.3 Working Drawings**

Working drawing development, review, and approval shall be in accordance with the INDOT Standard Specifications and Project Standards and shall be the responsibility of Design-Build Contractor. INDOT will review the working drawing approvals for conformance with standard INDOT practice.

## **2.4 Items List**

Design-Build Contractor shall submit a complete list of items representative of the Work to be performed under the Contract Price. The list shall be from the pay item list on the Department's website, any unique items as necessary, and shall be the list current for the letting date of the contract. The list shall include the item code, the item description, and the unit of measure for each item. Each item shall include a quantity and a unit price of \$0.00. Contract line numbers shall not be assigned to items on the list.

An initial items list shall be submitted according to instructions provided by INDOT at the Design Workshop meeting, broken out by each Des. No. within a Segment. Design-Build Contractor shall submit an updated items list throughout the life of the Project as new items of Work are added and previous items of Work are revised. Updated items list shall be submitted according to instructions provided by INDOT at the Design Workshop meeting and shall highlight those items added and revised since the previous submittal.

Design Plans shall include the bid items and quantities throughout the Plan set in accordance with the IDM requirements. Reducing redundancy of quantities and tables within a Plan set may be proposed by Design-Build Contractor for consideration, review, and approval at INDOT's sole discretion.

## **2.5 Correspondence**

All correspondence shall be routed through the Project website and addressed to INDOT's Project Engineer/Project Supervisor with copies to INDOT's Area Engineer, INDOT's Design-Build Project Manager, INDOT's Consultant Project Manager, INDOT's Consultant Design Manager, and INDOT's Document Control Manager.

## 2.6 As-Built Drawing Requirements

Design-Build Contractor shall prepare a complete full-size set of As-Built Drawings. The drawings shall conform to INDOT plan development and preparation guidelines for a Final Tracing Submittal. The As-Built Drawings shall be submitted to INDOT in electronic PDF format files. As-Built Drawings shall be posted to the Project website and provided on a CD, DVD, or flash drive.

## 2.7 Final Documents

Design-Build Contractor shall furnish INDOT final electronic copy documentation which shall include, but not be limited to: As-Built Drawings, engineering reports, design calculations, and Working Drawings. The final documentation shall include a final items list with final as-built quantities. The final items list shall be submitted according to instructions provided by INDOT at the [placeholder] meeting, by Designation Number, with quantity calculations for each item.

Design-Build Contractor shall submit final documentation for completed Work to INDOT for review and concurrence as the Work progresses. The final electronic copy documentation shall be submitted as one complete package and shall be certified by a Registered Professional Engineer. All information requested shall be submitted on a CD, DVD, or flash drive to both INDOT Central Office and INDOT LaPorte District.

INDOT will prepare the Final Construction Record which will incorporate the above information along with inspection and test results collected by INDOT.

## 2.8 Deliverables

Deliverables, a non-exhaustive list of which is set forth in the table below, shall be submitted in electronic format in accordance with the schedule set forth below. Acceptable electronic formats include PDF and current versions of Microsoft Word and Microsoft Excel, unless otherwise indicated.

<b>Deliverable</b>	<b>Submittal Schedule</b>	<b>TP Section</b>
Witness Points	Prior to submittal of associated RFC Documents for design related Witness Points.	2.1.1; 2.2
Hold Points	A minimum of two weeks prior to construction for construction related Hold Points. Prior to submittal of associated RFC Documents for design related Hold Points.	2.1.2; 2.2
Items List	Prior to the start of Work, but in no case later than 30 days after NTP.	2.4
Updated Items List	Monthly, unless no new items have been added during the month.	2.4
As-Built Drawings	Before or by Substantial Completion	2.6
Final Documents	Within 60 days after Final Acceptance.	2.7